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10/002,063	10/25/2001	Remi Gorski	000067	3596

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Patents Department
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EXAMINER

TRAN, THIEN D

ART UNIT PAPER NUMBER

2665

DATE MAILED: 06/16/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/002,063

Applicant(s)

GURSKI ET AL.

Examiner

Thien D. Tran

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 24 January 2005.
- 2a) ☒ This action is FINAL. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-33 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 17 is/are allowed.
- 6) ☒ Claim(s) 1-3, 5, 6, 8, 10-16 and 18-33 is/are rejected.
- 7) ☒ Claim(s) 4, 7 and 9 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1, 2, 3, 5, 10-16, 18-30, 32 are rejected under 35 U.S.C. 102(b) as being participated by Sutton (U.S Patent No. 5,805,648).

Regarding claim 1, Sutton discloses a method for searching for pilots in a wireless communication system, comprising:

searching at first stage over a designated code space for peaks in a received signal and providing a set of detected peaks, col.5 lines 55-65;

forming a plurality of dwell windows at second – fourth stages for the detected peaks, wherein the dwell windows have variable sizes, and cover variable number of detected peaks both being determined based on locations of the detected peaks in the designated code space, col.5 lines 55-65; and

searching over the dwell windows for peaks in the received signal and providing a set of one or more candidate peaks, col.5 line 60 to col.6 line 20, figure 4.

Regarding claim 18, Sutton discloses a method for searching for pilots in a CDMA communication system, comprising:

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performing a plurality of sets of searches for peaks in a received signal, wherein each set of searches is performed over a respective set of search windows, col.6 lines 18-27, and wherein at least one set includes search windows having variable sizes and covering variable numbers of expected peaks both being determined based on locations of expected peaks in the received signal, col.5 lines 60-65.

Regarding claims 22, 26 Sutton discloses demodulator in a wireless communication system, comprising:

a searcher operative to search over a designated code space for peaks in a received signal and to provide a set of detected peaks, col.5 lines 5-20; and

a controller operative to form a plurality of dwell windows for the detected peaks, wherein the dwell windows have variable sizes and cover variable numbers of detected peaks both being determined based on locations of the detected peaks in the designated code space, and wherein the searcher is further operative to search over the dwell windows for peaks in the received signal and to provide a set of one or more candidate peaks, figure 4.

Regarding claims 2, 25, 29 Sutton discloses the designated code space comprises or a portion of a pseudo-random noise (PN) sequence used to generate the pilots, col.3 lines 37-45.

Regarding claims 3, 21, 24, 28 Sutton discloses the forming the plurality of dwell windows for the detected peaks includes placing an individual search window on each detected peak, and search number of time with different window sizes, in case of big

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size window comprising small size windows (combining overlapping individual search windows), col.5 lines 15-25.

Regarding claim 5, Sutton discloses detecting energy level of detected peaks from window to window (sorting the detected peaks based on their locations in the designated code space), col.5 line 30 to col.6 lines 25.

Regarding claims 10, 32, Sutton discloses that the dwell windows are non-overlapping, col.5 lines 7-20.

Regarding claim 11, Sutton discloses that each individual search window has a particular size, col.5 lines 15-20.

Regarding claim 12, Sutton discloses that the size of each individual search window is 5 PN chips or less, col.4 lines 45-55.

Regarding claim 13, Sutton discloses that the individual search window is centered at each detected peak, figure 4.

Regarding claim 14, Sutton discloses that the dwell windows are formed such that each detected peak is included in only one dwell window, figure 4.

Regarding claim 15, Sutton discloses that the communication system is a CDMA system, col.2 lines 60-67.

Regarding claim 16, Sutton discloses the CDMA system conforms to IS-95 or cdma2000 standard, col.2 lines 63-67.

Regarding claim 19, Sutton discloses that variable number of peaks is returned for the variable-size search windows, col.5 lines 40-65.

Regarding claim 20, Sutton discloses that a first set of search windows includes equal-size, non-overlapping windows and covers a designated code space, col.6 lines 47-50.

Regarding claims 23, 27 Sutton discloses one or more finger processors operative to process and acquire the set of one or more candidate peaks, figure 1.

Regarding claim 30, Sutton discloses determining the number of peaks for each dwell window based on the number of detected peaks from searching number of times with different sizes of windows (covered by the dwell window), col.5 lines 1-35.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 6, 8, 31, 33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sutton (U.S Patent No. 5,805,648).

Regarding claims 6, 8, 31, 33 Sutton does not disclose limiting the number of overlapping individual search. However, it would have been obvious to one having ordinary skill in the art to have the feature of limiting the number of overlapping individual search so that the system can avoid the waste of resources.

Allowable Subject Matter

5. Claim 17 is allowed.
6. Claims 4, 7, 9 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Response to Arguments

7. Applicant's arguments filed 01/14/2005 have been fully considered but they are not persuasive.

Applicant argues that Sutton does not teach dwell windows, which have variable sizes, and cover variable number of detected peaks both being determined based on locations of the detected peaks in the designated code space. However, Examiner respectfully disagrees with the argument because Sutton teaches Sutton teaches dwell windows, which have variable sizes, col.5 lines 55-65, and cover variable number of detected peaks both being determined based on locations of the detected peaks in the designated code space, figures 2 and 4.

Applicant argues that Sutton does not disclose searching of combining overlap search windows. However, Examiner respectfully disagrees with the argument because Sutton teaches the search number of times with different window sizes, in case of big size window comprising small size windows (combining overlapping individual search windows), col.5 lines 15-25.

Applicant argues that Sutton does not teach sorting the detected peaks based on their locations. However, Examiner respectfully disagrees with the argument because Sutton teaches that the searcher continuously scan and evaluated number of peaks from searched window to searched window to find the right peak for acquisition, col.5 lines 1-20 (sorting the detected peaks based on their locations).

Applicant argues that Sutton does not teach that the dwell windows are formed such that each detected peak is include in only one dwell window. However, Examiner respectfully disagrees with the argument because Sutton teaches each searched window having only one maximum peak energy being detected as the highest peak, figure 4 (dwell windows are formed such that each detected peak is include in only one dwell window).

Applicant argues that Sutton does not teach limiting the number of overlapping individual search. However, Examiner respectfully disagrees with the argument because it would have been obvious to one having ordinary skill in the art to have the feature of limiting the number of overlapping individual search so that the system can avoid the waste of resources. It is common knowledge that if there is no limiting the number of overlapping individual search, then the system will keep searching forever with no ending (failed system).

Conclusion

8. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP

§ 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

9. Any inquiry concerning this communication or earlier communication from the examiner should be directed to Thien Tran whose telephone number is (571) 272-3156. The examiner can normally be reached on Monday-Friday from 8:30AM to 5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Huy Vu, can be reached on (571) 272-3155. Any inquiry of a general nature of relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (571) 272-2600.

10. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should

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you have any questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197.

Patent Examiner

Thien Tran

DUCHO
PRIMARY EXAMINER

A handwritten signature in black ink, appearing to read "Duchotto", written in a cursive style.